

9th NGRSM

National Geo-Research Scholars Meet - 2025

RISE : Resilient Innovations for Sustainable Earth



विज्ञान एवं प्रौद्योगिकी विभाग
DEPARTMENT OF
SCIENCE & TECHNOLOGY



Vision Viksit Bharat

Scientific Program

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Organised by

Wadia Institute of Himalayan Geology

(An Autonomous Institute of Department of Science & Technology (DST), Govt. of India)

Dehradun - 248 001

Date

12-14th November 2025

9th NGRSM -2025 @ WIHG Dehradun

Technical Program

Day 1/12th Nov. 2025

Inaugural Function

Inauguration 1000-1100 hrs

High Tea 1100-1130 hrs

1st Day Technical Sessions

Auditorium - Volcano Conference Hall

1st Session: Geodynamic processes and deep Earth study 1130-1235 hrs

Conveners: Drs Paramjeet Singh, Mutum Rajanikanta Singh, Kunda Badhe

Chair: Dr Paramjeet Singh, WIHG; **Rapporteur:** K Devika Sharma, NIO; **Coordinator:** Parakh Sahu, WIHG

Key Note Speaker: Prof. A K. Jain, Dept. of Earth Sciences, IIT Roorkee 1130-1150 hrs

Title: *Where are the Himalayan Rocks in the Himalaya?*

1st Rabisshi Chatterjee et al. (IEST, Shibpur, Howrah) Felsic Orthogneisses: Geochemical characterization and Thermobarometry, Unearthing the two-generation subduction and tectonics. 1150-1200 hrs

2nd Sharthak Ranjan Giri et al. (Kurukshetra University, Kurukshetra) Exhumation History of the Jutogh and Vaikrita Thrustsheet of the Himachal region, Northwestern Himalaya: Insights from Fission-Track Thermochronology. 1200-1210 hrs

3rd Shreya Kulkarni et al. (Manipal Institute of Technology, Manipal) Magnetic Fabric Analysis of the Sylhet Traps: Insights into Lava Flow Directions and Tectonic Controls. 1210-1220 hrs

4th Gouri Shankar Mukherjee (Jadavpur University, Kolkata) Unveiling the Mechanisms of Asymmetry in In-Dip Double Subduction Systems via Dynamic Modeling. 1220-1230 hrs

Concluding Remark & Felicitation 1230-1235 hrs

2nd Session: Quaternary Geology: Climate and Tectonics 1235-1340 hrs

Conveners: Drs Anil Kumar, Som Dutt, Chhavi Pant Pandey

Chair: Dr Som Dutt, WIHG; **Rapporteur:** Sushmita Sen, IITR; **Coordinator:** Mohd. Sharukh, WIHG

Key Note Speaker: Dr Pradeep Srivastava, Dept. of Earth Sciences, IIT Roorkee 1235- 1255 hrs

Title: *Applications of Metagenomics and Biomarkers in Geosciences: A New Frontier*

1st Sandeep Panda et al. (WIHG) Deciphering erosional hotspots in the Yarlung–Tsangpo–Brahmaputra system through integrated Petrographic, Sr-Nd Isotope, and Zircon Provenance Analysis. **1255-1305 hrs**

2nd Ammoose K Jayan et al. (Kerala Central University) Did *Globigerinoides ruber* (pink) Disappear Entirely from the Indian Ocean After 120 kyr BP? **1305-1315 hrs**

3rd Poonam Chahal et al. (Hebrew University of Jerusalem, Israel) Late Quaternary River dammed lake deposits in the Himalayan rain shadow- implications to landscape evolution and sediment dynamics. **1315-1325hrs**

4th Soumyadip Banerjee et al. (Calcutta University) Basin Evolution Under Shifting Tectono-Climatic Regimes: A Process–Response Approach from the Sikkim Himalaya. **1325-1335 hrs**

Concluding Remark & Felicitation **1335-1340 hrs**

Lunch Break **WIHG Lawn - Gangotri Ann-Mandapam** **1340 -1430 hrs**

Parallel Workshop 1st (Open Source-Dr Gautam Rawat) **WIHG Committee Room 1430-1530 hrs**
Conveners: Drs Sudipta Sarkar, Vandana, Bappa Mukherjee

3rd Session: Sedimentary Horizons and Past Life **1430-1535 hrs**

Conveners: Drs Prakasam M., Subhojit Saha, Ningthoujam Premjit Singh

Chair: Dr Subhajit Saha, WIHG; **Rapporteur:** Rohit Kumar Punjab Univ.; **Coordinator:** Konsam Nildji, WIHG

Key Note Speaker: Prof. Sunil Bajpai, Dept. of Earth Sciences, IIT Roorkee 1430-1450 hrs
Title: Mass extinctions in the geological past: the Indian context

1st Aatreyee Saha (IIT Roorkee) New Evidence from the Digital Endocasts on the Brain Evolution in Eocene and Miocene Sirenians from Kutch, Western India. **1450-1500 hrs**

2nd Yadav K. Gogoi et al. (Dibrugarh University) Palynological insights into the Miri Group/Formation (?) and Lower Gondwana Group of Arunachal Himalayas, NE India: An appraisal to stratigraphic uncertainties and Indian plate development. **1500-1510 hrs**

3rd M.M. Kasdekar et al. (Amravati University) Geochemical baseline characterization of surface sediments from Lonar hyperalkaline crater lake, central India: Integrated XRF-ICP-MS analysis for environmental monitoring and planetary analog applications. **1510-1520 hrs**

4th Heni Echeni (Manipur University) Ichnology and Petrography of the Laisong Formation, Late Eocene-Early Oligocene, Barail Group, along Maram-Peren Road, Manipur. By **1520-1530 hrs**

Concluding Remark & Felicitation **1530-1535 hrs**

4th Session: Envir. Geology, Natural Resources, Hazard & Mitigation **1535-1640 hrs**

Conveners: Drs Swapnamita Vaideswaran, Suman Lata Srivastava, Pramod Rajak

Chair:Dr Swapnamita V,WIHG; **Rapporteur:** Dr Druv S Gupta, BHU **Coordinator:** Riya Singh,WIHG

Key Note Speaker: Dr Satish R. Shetye, Former VC, Univ. of Goa **1535-1555 hrs**

Title: *An overview of near-surface wind-driven circulation of the North Indian Ocean*

1st Sabari Nathan Chellamuthu (VIT Vellore) Spatio-Geophysical Evaluation of Ground Conditions and Vehicle-Induced Vibrations in the Nilgiris Landslide–Transportation Interaction Corridor.

1555-1605 hrs

2nd Sury Kant Singh et al. (BHU) Recharge Sources and Mobilization Pathways of Trace Elements Contamination in Groundwater of Singrauli, India.

1605-1615 hrs

3rd P. Zachamo Yanthan et al. (Nagaland University) Significant critical minerals deposits in Wokha district coal deposits of Nagaland, North-Eastern, Himalaya (India).

1615-1625 hrs

4th Arun K.S. Kushwaha et al. (Allahbad University) Understanding Spatial Distribution of Landslides in Almora District Using GIS Based Statistical Analysis and Machine Learning Models.

1625-1635 hrs

Concluding Remark & Felicitation **1635-1640 hrs**

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Tea & Poster Session I **Karakoram Hall & Kangchenjunga Hall** **1640 -1830 hrs**

Cultural Program **Auditorium - Volcano Conference Hall** **1830-1930 hrs**

9th NGRSM Dinner **Banquet Hall Dinner** **2000-2300 hrs**

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Day 2/ 13th Nov. 2025

2nd Day Technical Sessions

Auditorium - Volcano Conference Hall

Parallel Workshop 2nd (Geology Survey Dr Chatteraj IIRS) WIHG Comm. Room **0900 -1000 hrs**

Conveners: Drs Sudipta Sarkar, Vandana, Bappa Mukherjee

Popular Talk Session Auditorium-Auditorium - Volcano Conference Hall 0900-0945 hrs

Chairperson: Dr Vineet K. Gahalaut, Director WIHG

Dr Aparna Shukla Scientist –Ministry of Earth Sciences, New Delhi **0900-0920 hrs**

Title: *Himalayan Cryosphere: Status and Updates*

Dr P. K. Mukherjee, Scientist (Rtd.) WIHG **0920-0940 hrs**

Title: *Recent Advancements in LA-ICP-MS Technique and Its Ever-Expanding Applications in Geoscience*

Concluding Remark & Felicitation **0940-0945 hrs**

5th Session: Advances in seismo-tectonics, sub-surface imaging and crustal deformation **0945-1050 hrs**

Conveners Drs Rajesh S., Parveen Saini, Mahesh Ramrao Kapawar

Chair: Dr Rajesh S., WIHG; **Rapporteur:** Krati Gupta, IIG; **Coordinator:** Pramit Chatterjee, JU.

Key Note Speaker: Dr C. P. Rajendran, NIAS, Bengaluru **0945-1005 hrs**

Title: *Medieval pulse of great earthquakes in the Central Himalayas: Using past activities for seismic prognostication*

1st Lalruatpuia Tlau et al. (Mizoram University, Mizoram) Imaging the lithosphere-Asthenosphere Boundary and Subduction Geometry in the Indo-Burma Region

1005-1015 hrs

2nd Shubham K. Rajewar et al. (NGRI) Present-Day Crustal Deformation and Strain Rates of and Around the Indian Plate from GPS Measurements

1015-1025 hrs

3rd Swati Chakraborty et al. (IIT Kharagpur) Joint Inversion of Self-Potential and Magnetic Data for 2D Inclined Thick Sheet Anomalies: Uncertainty and Resolution Analysis.

1025-1035hrs

4th Sunil Saini et al. (IIG, Mumbai) Characterization of the Rayleigh Surface Waves from Ionospheric Observations during the Mw 9.1 Tohoku-Oki Earthquake.

1035-1045 hrs

Concluding Remark & Felicitation **1045-1050 hrs**

Tea Break

1050-1110 hrs

Poster Lightning Talk Session	Auditorium-Volcano Conference Hall	1110-1345 hrs
Chairperson: Dr Kalpna Gahalaut , Chief Scientist, NGRI		
	<i>Concluding Remark & Felicitation</i>	1345-1350 hrs

Lunch Break	WIHG Lawn - Gangotri Ann-Mandapam	1350-1430 hrs
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6th Session: Cryosphere, Geohydrology and Geoengineering 1430-1535 hrs

Conveners: Drs Rakesh Bhambri, Rouf Ahmad Shah, Tariq Anwar Ansari

Chair: Dr Rakesh Bhambri, WIHG; **Rapporteur:** M. Prajapati, Ladakh; **Coordinator:** Sarmistha Halder, WIHG

Key Note: Prof Sudhir Kumar, Former Director, NIH Roorkee **1430-1450 hrs**
Title: Impact of Climate Change on Hydrological Processes in Himalayan Cryosphere

1st Devrajgogoi et al. (IIRS, Dehradun) Assessment of Glacier Dynamics in the Indian Himalaya Region. **1450-1500 hrs**

2nd Nikhil Kumar et al. (University of Jammu) Debris variability and velocity estimation Using DInSAR & Electrical Resistivity Tomography Techniques of Durung Drung Glacier, Northwestern Himalaya. **1500-1510 hrs**

3rd Ramesh Kamalpathy et al. (Pondicherry University) Numerical Insights into Groundwater Flow and Seawater Intrusion in Multi-layered Coastal Aquifers of South-Eastern India: Predicting the Effectiveness of Surface Water Rejuvenation. **1510-1520 hrs**

4th Champa Banerjee et al. (IIT KGP) Delineating Groundwater-Seawater Interaction Using Integrated Thermal, Spectral, and Chemical Approaches. **1520-1530 hrs**

Concluding Remark & Felicitation 1530-1535 hrs

7th Session: Analytical tools and techniques in Geosciences 1535-1640 hrs

Conveners: Drs Saurabh Singhal, Narender Kumar, Jitender Kumar

Chair: Dr Saurabh Singhal, WIHG; **Rapporteur:** Bishal Singh, Dibrugarh; **Coordinator:** Aman Shrivastava, WIHG

Key Note Speaker: Prof. Ravikant Vadlamani, IIT, Kharagpur **1535-1555 hrs**
Title: Geochronometry basics and time constraints on orogenesis

1st Pallavi Uniyal (HNB Garhwal University) Integrated Usage of PRISMA Hyperspectral data and Spectroscopy to detect base metal sulphide mineralization: A Case Example from Dhanpur area, Rudraprayag, Uttarakhand. **1555-1605 hrs**

2nd Vishal Jain et al. (Maulana Azad National Institute of Technology Bhopal) Geospatial Deep Learning Framework for Leak Detection in Mountain Water Distribution Networks: Integrating Geological Parameters and Topographic Constraints. **1605-1615 hrs**

3rd Khundrakpam N. Devi et al. (Manipur University) Assessment of Groundwater Potential of Imphal Valley, NE India Using Remote Sensing and GIS. **1615-1625 hrs**

4th Malavika A.R. et al. (MES Ponnani College, Kerala) Evaluating Machine Learning Models for Predicting Irrigation Water Quality Index: Insights from aquifers in a Tropical River Basin of Northern Kerala. **1625-1635 hrs**

Concluding Remark & Felicitation 1635-1640 hrs

Tea & Poster Session III Karakoram Hall & Kangchenjunga Hall 1640-1730 hrs

Valedictory & Prize Distribution Auditorium - Volcano Conference Hall 1730-1830 hrs

Day 3/ 14th Nov. 2025 @ 0900 hrs Field Program

Field Excursion at Tons Valley-Lesser Himalayan Sequence 0900-1600 hrs ---
